TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective June 1, 2011
RC-3 Revised January 1, 2012

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **June 2012.***

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

TAMKO Awaplan manufactured by

TAMKO Building Products, Inc.
220 W. Fourth Street
Joplin, MO 64801
Telephone: (800) 641-4691

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

Awaplan Premium, Awaplan 170, Awaflex – polyester reinforced, SBS-modified, granule-surfaced roofing membrane.

Awaplan Premium FR, Awaplan 170 FR – fire-resistant, polyester reinforced, SBS-modified, granule-surfaced roofing membrane.

Versa-Cap FR – fiberglass reinforced, SBS-modified, granule-surfaced roofing membrane.

SA Cap– polyester reinforced, SBS-modified, self-adhered, granule-surfaced roofing membrane.

Awaplan SA FR – fire-resistant, polyester reinforced, SBS-modified, self-adhered, granule-surfaced roofing membrane.

Awaplan Versa-Smooth – polyester reinforced, SBS-modified base sheet.

Awaplan Versaflex – polyester reinforced, SBS-modified base sheet.

Versa-Base – fiberglass reinforced, SBS-modified base sheet.

Base-N-Ply – fiberglass reinforced, SBS-modified base sheet.

Vapor-Chan – fiberglass reinforced venting base sheet.

Glass-Base – fiberglass reinforced base sheet.

Tam-Ply IV – fiberglass reinforced ply sheet.

Tam-Glass Premium – fiberglass reinforced ply sheet.

Type 43 Coated Base Sheet – organic base sheet.

SA Base – fiberglass reinforced, SBS-modified, self-adhered base sheet.

Awa Nailbase – fiberglass reinforced, SBS-modified base sheet.

Awabase SA – fiberglass reinforced, SBS-modified, self-adhered base sheet.

LIMITATIONS

General installation Requirements: All International Residential Code (IRC) and the International Building Code (IBC) requirements must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation. If a non-structural sheathing (insulation or gypsum board) is used, then the length of the fasteners used to secure the roof components shall be increased by the thickness of the non-structural sheathing.

For All applications: The roof shall have a minimum slope of $\frac{1}{4}$:12.

TABLE 1: WIND UPLIFT PERFORMANCE – MECHANICALLY ATTACHED BASE SHEET								
Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet[1]**	**Cap Sheet[2]**
1	5/8-inch plywood	Optional - any thickness, any acceptable glass faced polyisocyanruate or perlite	Same as base sheet	N/A	Base-N-Ply, Vapor-Chan, Versa-Base, Awaplan Versaflex, or Awaplan Versa-Smooth	No. 12-13, No. 3 Phillips drive, truss head galvanized steel screws with 3 inch diameter, No. 26 MSG thick galvanized steel plates	(Optional) Applied in hot asphalt, a min. of 23 lbs./square	Applied in hot asphalt, a min. of 23 lbs./square or heat fused
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 45	8-inch o.c. at 2-inch laps and 16-inch o.c. at two, equally spaced, staggered center rows.							
45 < P ≤ 50	6-inch o.c. at 2-inch laps and 9-inch o.c. at two, equally spaced, staggered center rows.							
50 < P ≤ 70	6-inch o.c. at 2-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows.							
70 < P ≤ 90	6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.							
90 < P ≤ 120	6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.							

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet[3]**	**Cap Sheet[2]**
2	15/32-inch plywood	(Optional) Any thickness, any acceptable glass faced polyisocyanruate, polystyrene, cellular glass, wood fiber, or perlite	Applied in hot asphalt over the base sheet	N/A	Base-N-Ply, Vapor-Chan, Versa-Base, Awaplan Versaflex, or Awaplan Versa-Smooth	OMG No. 12-13, No. 3 Phillips drive, truss head galvanized steel screws with 3 inch diameter, No. 26 MSG thick galvanized steel plates	(Optional) Applied in hot asphalt, a min. of 23 lbs./square	Applied in hot asphalt, a min. of 23 lbs./square or heat fused (Optional to cap sheet) A cold applied coating or Tam-Cap
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 55	8-inch o.c. at 2-inch laps and 16-inch o.c. at two, equally spaced, staggered center rows.							
55 < P ≤ 60	6-inch o.c. at 2-inch laps and 9-inch o.c. at two, equally spaced, staggered center rows.							
60 < P ≤ 80	6-inch o.c. at 2-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows.							
80 < P ≤ 110	6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.							
110 < P ≤ 120	6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.							

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet[1]**	**Cap Sheet[2]**
3	$^{15}/_{32}$-inch plywood	(Optional) Any thickness, any acceptable glass faced polyisocyanruate, polystyrene, cellular glass, wood fiber, or perlite	Applied in hot asphalt over the base sheet	N/A	Base-N-Ply, Vapor-Chan	Galvanized steel cap nails with a 1 inch diameter head, a 0.035 inch thick galvanized steel cap, and a 0.115 inch diameter by $1\,^{5}/_{8}$ inch long annular ring shank	(Optional) Applied in hot asphalt, a min. of 23 lbs./square	Applied in hot asphalt, a min. of 23 lbs./square or heat fused
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 37.5	8-inch o.c. at 4-inch laps and 8-inch o.c. at three, equally spaced, staggered center rows.							
37.5 < P ≤ 40	6-inch o.c. at 4-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.							
40 < P ≤ 50	6-inch o.c. at 4-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.							
50 < P ≤ 60	6-inch o.c. at 4-inch laps and 6-inch o.c. at five, equally spaced, staggered center rows.							
60 < P ≤ 70	6-inch o.c. at 4-inch laps and 6-inch o.c. at six, equally spaced, staggered center rows.							
70 < P ≤ 90	4-inch o.c. at 4-inch laps and 4-inch o.c. at five, equally spaced, staggered center rows.							

TABLE 1: WIND UPLIFT PERFORMANCE – MECHANICALLY ATTACHED BASE SHEET								
Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet**	**Cap Sheet[2]**
5	$^{15}/_{32}$-inch plywood	(Optional) Any thickness, any acceptable glass faced polyisocyanruate, polystyrene, cellular glass, wood fiber, or perlite	Hot mopped	(Optional) Minimum 5/8 inch thick board mechanically fastened with base sheet to the deck	Base-N-Ply, Vapor-Chan, Versa-Base, Awaplan Versaflex, or Awaplan Versa-Smooth	No. 12-13, No. 3 Phillips drive, truss head galvanized steel screws with 3 inch diameter, No. 26 MSG thick galvanized steel plates	N/A	Applied in hot asphalt**,** a min. of 23 lbs./square or Tam-Pro 856 Premium SBS cold process adhesive, a min. of 1.5 gallons/square
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 37.5	8-inch o.c. at 2-inch laps and 16-inch o.c. at two, equally spaced, staggered center rows.							
37.5 < P ≤ 40	6-inch o.c. at 2-inch laps and 12-inch o.c. at two, equally spaced, staggered center rows.							
40 < P ≤ 60	6-inch o.c. at 2-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows.							
60 < P ≤ 80	6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.							
80 < P ≤ 100	6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.							

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet**	**Cap Sheet²**
6	$^{15}/_{32}$-inch plywood	N/A	N/A	(Optional) Minimum 5/8 inch thick board mechanically fastened with base sheet to the deck	Type 43 Organic Base Sheet	No. 12-13 galvanized steel truss head screws with 3 inch diameter, No. 26 MSG thick galvanized steel plates	N/A	Applied in hot asphalt, a min. of 23 lbs./square or heat fused
Design Pressures (psf)		Base Sheet Fastener Spacing						
0 < P ≤ 45		6-inch o.c. at 2-inch laps and 12-inch o.c. at two, equally spaced, staggered center rows.						
45 < P ≤ 50		6-inch o.c. at 2-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows.						
50 < P ≤ 70		6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.						
70 < P ≤ 90		6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.						
90 < P ≤ 100		6-inch o.c. at 2-inch laps and 6-inch o.c. at five, equally spaced, staggered center rows.						
100 < P < 120		6-inch o.c. at 2-inch laps and 6-inch o.c. at six, equally spaced, staggered center rows.						

TABLE 1: WIND UPLIFT PERFORMANCE – MECHANICALLY ATTACHED BASE SHEET								
Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet¹**	**Cap Sheet²**
7 and 8	$^{15}/_{32}$-inch plywood	(Optional) Any thickness, any acceptable glass faced polyisocyanruate, polystyrene, cellular glass, wood fiber, or perlite	hot mopped	N/A	Base-N-Ply, Vapor-Chan, Versa-Base, Awaplan Versaflex, or Awaplan Versa-Smooth	No. 12-13, No. 3 Phillips drive, truss head galvanized steel screws with 3 inch diameter, No. 26 MSG thick galvanized steel plates	(Optional) Applied in hot asphalt, a min. of 23 lbs./square or Tam-Pro CPA Premium SBS cold process adhesive, a min. of 1.5 gallons/square	Applied in hot asphalt, a min. of 23 lbs./square or Tam-Pro 856 Premium SBS cold process adhesive, a min. of 1.5 gallons/square
Design Pressures (psf)		Base Sheet Fastener Spacing						
0 < P ≤ 37.5		8-inch o.c. at 2-inch laps and 16-inch o.c. at two, equally spaced, staggered center rows.						
37.5 < P ≤ 40		6-inch o.c. at 2-inch laps and 12-inch o.c. at two, equally spaced, staggered center rows.						
40 < P ≤ 60		6-inch o.c. at 2-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows.						
60 < P ≤ 80		6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.						
80 < P ≤ 100		6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.						

TABLE 1: WIND UPLIFT PERFORMANCE – MECHANICALLY ATTACHED BASE SHEET								
Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet[1]**	**Cap Sheet[4]**
9 and 10	$^{15}/_{32}$-inch plywood	N/A	N/A	N/A	Glass-Base	No. 13 x 1 $^{5}/_{8}$ inch long galvanized steel screws with nominal 2 $^{7}/_{8}$ inch diameter OMG galvalume plates	(Optional) Applied in Tam-Pro CPA Premium SBS cold process adhesive, a min. of 1.5 gallons/square	Applied in hot asphalt a min. of 23 lbs./square
Design Pressures (psf)		Base Sheet Fastener Spacing						
0 < P ≤ 37.5		8-inch o.c. at 2-inch laps and 16-inch o.c. at two, equally spaced, staggered center rows.						
37.5 < P ≤ 40		6-inch o.c. at 2-inch laps and 12-inch o.c. at two, equally spaced, staggered center rows.						
40 < P ≤ 50		6-inch o.c. at 2-inch laps and 8-inch o.c. at two, equally spaced, staggered center rows.						
50 < P ≤ 60		6-inch o.c. at 2-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows.						
60 < P ≤ 67.5		7-inch o.c. at 2-inch laps and 7-inch o.c. at three, equally spaced, staggered center rows.						
67.5 < P ≤ 70		6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.						
70 < P ≤ 90		6-inch o.c. at 2-inch laps and 6-inch o.c. at five, equally spaced, staggered center rows.						
90 < P ≤ 110		6-inch o.c. at 2-inch laps and 6-inch o.c. at six, equally spaced, staggered center rows.						

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet**	**Cap Sheet**
11	$^{15}/_{32}$-inch plywood	N/A	N/A	N/A	SA Base	Ring shank 1 $^{1}/_{4}$ inch long galvanized cap nails (12 gauge) with 1 inch diameter galvanized metal cap (19 gauge)	N/A	SA Cap, self-adhered
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 22.5	8-inch o.c. at 2-inch laps and 8-inch o.c. at two, equally spaced, staggered center rows.							
22.5 < P ≤ 30	6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.							
30 < P ≤ 40	6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.							
40 < P ≤ 50	4-inch o.c. at 2-inch laps and 4-inch o.c. at four, equally spaced, staggered center rows.							
50 < P ≤ 70	4-inch o.c. at 2-inch laps and 4-inch o.c. at five, equally spaced, staggered center rows.							
70 < P ≤ 80	4-inch o.c. at 2-inch laps and 4-inch o.c. at six, equally spaced, staggered center rows.							

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet**	**Cap Sheet**
12	$^{15}/_{32}$-inch plywood	N/A	N/A	N/A	Awa Nailbase	Ring shank 1 $^{1}/_{2}$ inch long galvanized cap nails (11 gauge) with 1 inch diameter galvanized metal cap (18 gauge)	(Optional) Awabase SA, self-adhered	Awaplan SA FR, self-adhered
Design Pressures (psf)	Base Sheet Fastener Spacing							
20 < P ≤ 30	6-inch o.c. at 3-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.							
30 < P ≤ 40	6-inch o.c. at 3-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.							
40 < P ≤ 60	4-inch o.c. at 3-inch laps and 4-inch o.c. at four, equally spaced, staggered center rows.							
60 < P ≤ 70	4-inch o.c. at 3-inch laps and 4-inch o.c. at five, equally spaced, staggered center rows.							
70< P ≤ 80	4-inch o.c. at 3-inch laps and 4-inch o.c. at six, equally spaced, staggered center rows.							

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet**	**Cap Sheet**
13	$^{15}/_{32}$-inch plywood	N/A	N/A	N/A	Awa Nailbase	$1\,^{5}/_{8}$ inch long galvanized steel standard roofing screws with $2\,^{7}/_{8}$ inch diameter galvalume washers	(Optional) Awabase SA, self-adhered	Awaplan SA FR, self-adhered
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 37.5	8-inch o.c. at 3-inch laps and 16-inch o.c. at two, equally spaced, staggered center rows.							
37.5 < P ≤ 40	8-inch o.c. at 3-inch laps and 8-inch o.c. at two, equally spaced, staggered center rows.							
40 < P ≤ 50	6-inch o.c. at 3-inch laps and 8-inch o.c. at two, equally spaced, staggered center rows.							
50 < P ≤ 60	6-inch o.c. at 3-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows.							
60 < P ≤ 80	6-inch o.c. at 3-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows.							
80 < P ≤ 100	6-inch o.c. at 3-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows.							

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet**	**Cap Sheet**
14	$^{15}/_{32}$-inch plywood, primed	N/A	N/A	N/A	Awabase SA, self-adhered	N/A	(Optional) Awabase SA, self-adhered	Awaplan SA FR, self-adhered
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 45.0	N/A							

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Assembly No.	**Substrate**	**Insulation Layer(s)**		**Gypsum Board**	**Roof Cover**			
		Type	**Attachment**		**Base Sheet**	**Fasteners**	**Ply Sheet**	**Cap Sheet**
15	$^{15}/_{32}$-inch plywood, primed	N/A	N/A	N/A	SA Base, self-adhered	N/A	N/A	SA Cap, self-adhered
Design Pressures (psf)	Base Sheet Fastener Spacing							
0 < P ≤ 52.5	N/A							

Footnotes for Table 1:

1. The ply sheet shall consist of one or more layers of Tam-Ply IV, Tam-Glass Premium, Glass-Base, Base-N-Ply, Vapor-Chan, Versa-Base, or Awaplan Versa-Smooth.
2. The cap sheet shall consist of Awaplan 170, Awaplan 170 FR, Awaplan Premium, Awaplan Premium FR, Awaplan Versa-Smooth, Awaflex, Awaplan Versaflex or Versa-Cap FR installed in hot asphalt or Awaplan Versa-Smooth heat fused. Awaplan Versa-Smooth and Awaplan Versaflex require surfacing with a flood coat of asphalt and gravel, a cold applied coating, or Tam-Cap.
3. The ply sheet shall consist of one or more layers of Tam-Ply IV, Tam-Glass Premium, Glass-Base, Base-N-Ply, Vapor-Chan, Versa-Base, Awaplan Verssaflex, or Awaplan Versa-Smooth.
4. The cap sheet shall consist of one layer of Awaplan 170, Awaplan 170 FR, Awaplan Premium, Awaplan Premium FR, Awaflex, or Awaflex FR.

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.